Outline of the Proposed Research Work Entitled

A MICRO LEVEL ANALYSIS OF POPULATION ASPECTS IN SOLAPUR DISTRICT (MAHARASHTRA STATE)

Synopsis

Submitted to

स्वामी रामानंद तीर्थ मराठवाडा विद्यापीठ, नांदेड.

SWAMI RAMANAND TEERTH MARATHWADA UNIVERSITY, NANDED

FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

IN

GEOGRAPHY

UNDER THE FACULTY OF HUMANITIES

BY

MR. KAMBLE PRAVIN BHANUDAS

UNDER THE SUPERVISION OF

Dr. PARAG ARUN KHADKE

Department of Geography
Professor and Research Guide,
School of Earth Science,
Swami Ramanand Teerth Marathwada University,
Nanded–431606

AUGUST 2023

A MICRO LEVEL ANALYSIS OF POPULATION ASPECTS IN SOLAPUR DISTRICT (MAHARASHTRA STATE)

1. Introduction

Geography is a very interesting and fascinating subject which acknowledges the human beings about the distinct natural and cultural features of the world. The genealogy and the evolution of the subject, before Christian Era, have been passed through various phases and many new ideas and concepts were added from time to time. Modern Geography has been described as a science, an art and a philosophy. It is concerned with the interrelationship of man and his environment, with the earth as a home of man and with the relationship of these features of the earth's surface which owe their origin due to work of man (Stamp, L.D, 1956). Branching of Geography into Human Geography may be traced back to the period (17^{th} and 18^{th} century) of Verenius and Kant. Human geography studies cultural landscapes of the area, its nature and distribution, and their relationship with the physical landscape. Population Geography, an important branch of geography, belongs to that borderland of geography which opens on Demography, Sociology and Economics. Population Geography is an area of specialization within the orbit of the major discipline of Geography is a recent development. Despite of the pivotal position of man in the totality of the nature of the places, he was not subjected to a specialized analysis in systematic geography.

2. Review of Literature

Population geography is relatively recent and largely underdeveloped branch of geography. It was as recent as 1953 when Prof. Gleen T. Trewartha made a case for Population Geography as a sub-division of systematic geography. It is in this light that population geography attains significance and logically becomes an important systematic branch of geography.

G.S. Gosal's doctoral work in the mid-fifties on 'A Geographical Analysis of India's population' marks a beginning of systematic population geography in India. Following his theme and methodology, several scholars subsequently brought out doctoral dissertations and research papers in this new field of specialization. The new trends of research in this branch reveal not only coverage of the various characteristics of population but also improvement in methodology and scales - macro, meso and micro.

However, for a comprehensive assessment of the progress made by population geography, it would be necessary to take stock of research work done on each aspect separately.

Chandna (1974) analysed the growth of rural population in Rohtak and Gurgaon districts by using village-wise data and examined the impact of proximity of Delhi in this respect. It was found that the highest growth rates were experienced by villages located on the roads radiating from Delhi. Krishan (1975) also examined the patterns of population growth in India during 1961-71 by using district level data. The explosive growth of India's population was viewed in the context of its birth rate and industrial growth rate.

Om Praksh (1970) while analyzing the patterns of density and distribution of population in U.P., mapped the tahsil and district level data of U.P.

A geographical analysis of sex composition of population of Assam was made by Bimal Barah (2002). She measured and correlated the degree of relationship and degree of urbanization with the sex composition of the population in the state.

Mohankumar and Shivlingappa (2003) jointly made a spatio-temporal analysis of pattern of sex ratio in Karnataka state.

Singh and Chauhan (2010) analyzed the literacy differentials at district level in Rajasthan by sex, residence and social groups to identify the levels of literacy of districts both at the sectoral as well as aggregate levels.

Kaur (1982) made a comprehensive analysis of changes in occupational structure of India during 1961-1971. His study was focused mainly upon male workers. The index of change and degree of diversification were employed to the study.

Singh (1969) has analyzed the net migration and migrational techniques of rural population of Hissar district in Haryana.

Mehta (1973) tried to study patterns of migration in the Bist Doad in 1951-1961 from the analysis of data on population growth.

3. Study Area

The study area is a district i.e. 'SOLAPUR DISTRICT' in Maharashtra state of India. Its selection identifies and recognizes 'DISTRICT' as basis of the administrative system in India. It is the most important of all the units in area administration. Today, it is

also the best area for geographical and functional aggregation of units and branches of administration. Infect it bears logical relation to its area, resources and population. For the micro level study of various population aspects, all the 1139 inhabited villages and 12 urban centers distributed in 11 tahsils of the district are taken into consideration.

The district of Solapur is one of the most important districts of Maharashtra State, both in terms of area and population. It lies entirely in the Bhima-Sina-Man basins. The district of Solapur is located between $17^0$10' North and $18^0$32' North latitudes and $74^0$42' East and $76^0$15' East longitudes. The East-West Length of the district is about 200 Km and North-South width is about 150 Km.

It has an average elevation of 458 meters mean sea level. The annual average rainfall is 722.7 mm in Solapur, and it is highest in the months of July, August and September. The mean daily maximum temperature of 39.9^0C and the mean daily minimum temperature of about 25.2^0C. The heat during the summer season is very intense and the maximum temperature may sometimes go up to 44^0C.

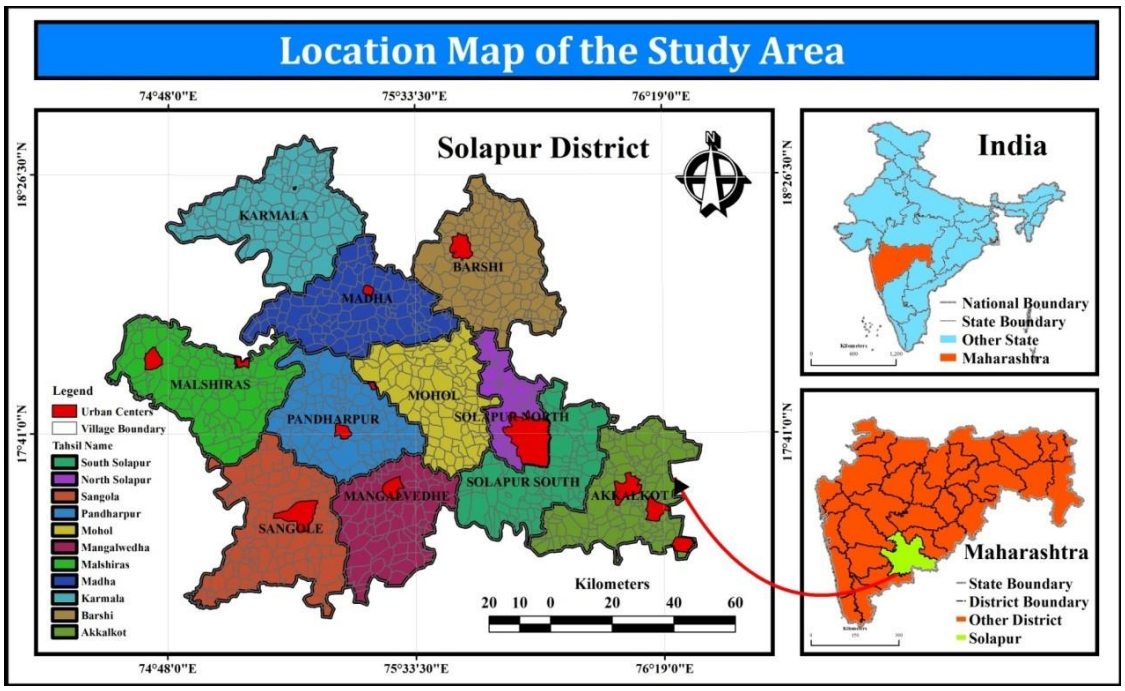

Fig. 1

4. Choice of the Study Area

The study area is a district i.e. 'SOLAPUR DISTRICT' in Maharashtra state of India. Its selection identifies and recognizes 'DISTRICT' as basis of the administrative

system in India. It is the most important of all the units in area administration. Today, it is also the best area for geographical and functional aggregation of units and branches of administration. Infect it bears logical relation to its area, resources and population. For the micro level study of various population aspects, all the 1139 inhabited villages and 13 urban centers distributed in 11 tahsils of the district are taken into consideration.

The choice of the study area and importance of the topic is the result of several considerations given as under:

1. Solapur district is a part of Deccan table land and occupies the Southern parts of Maharashtra Plateau. It is one of the most variable areas in population characteristics.
2. Being the native district of the researcher, he is well familiar with physical, climatic and population conditions of the area.
3. In the field of rural development the district has witnessed outstanding leadership is national status responsible for building of a sound network of cooperatives and for initiating agro-industrial development (Planning Board)[113].
4. The Bhima, Nira, Man, Sina, Bhogavati and Bori are the major rivers with their tributaries influencing the area under investigation.
5. Within the study area there is a spatial variation in population change, distribution and density, literacy, migration and occupational structure of population.
6. The district is bestowed with remarkable resources in men, material and build in capacity to fight the vagaries of nature and the constant adverse circumstances.
7. The district has varied problems relating to various population aspects which are challenges for planners and researchers.
8. Behind these rather spectacular aspects lie many factors of the district's economy that present problems and challenges.

The present study, therefore, concerns itself with one of her most important aspect, namely, 'The Population'.

5. The Study Period

1. The analytical study of various population aspects at district and tahsil and village levels, has been made by using the census data of 1991, 2001 and 2011.

2. The migration analysis has been made by using primary data, collected by author and secondary data collected from Health Service Department and the census records of 1991 to 2011.

6. Objectives of the Study

The main objective of the present study is to analyze the various characteristics and patterns of population in Solapur district at 3 different levels; viz., i) Macro level – the district ii) Meso level – 11 tahsils and iii) Micro level – 1039 villages and 13 urban centers. This is viewed in the light of following specific objectives:

1. To obtain the information about spatial pattern of population change over time.
2. To study the distribution and density patterns of rural and urban population.
3. To examine the spatial patterns and temporal changes in the sex ratio and to analyze different components of sex ratio.
4. To analyze the spatial patterns of literacy in the study area.
5. To evaluate the work participation rates of the study area at all levels.

6. Sources of Data

A population geographer requires data pertaining to various aspects of population at a specific point in time, as well as about the trends in these aspects through time. The present study is partially based on secondary data which is complemented by primary as well as tertiary data. Therefore, required data is collected from the various sources.

6.1 Primary Sources:

The Primary Data, especially on migration, is collected by the purposive selected sample survey method. According to geographical situation and cultural, socio – economic conditions, 29 case study villages from the study area are selected and 575 respondents are interviewed. Migrants, community leaders, scholars, senior citizens, political leaders, social workers etc. have been interviewed in search of such data. Questionnaire and Schedule techniques are employed for the collection of facts regarding the study. During field survey 80 per cent in- migrants are interviewed.

6.2 Secondary Sources:

1. The Census: Fortunately, the population statistics required by population geographers are available largely from a single official source that is 'The Census'. The Census is an

extremely useful source of knowledge and information available through it all over the world "is contributing to a revolutionary expansion of global economic, sociological and demographic knowledge." The following census publications are used for the present study :

i) Census of India publication: The Maharashtra Census Directorate, Bombay, District Census Handbooks of Solapur District, 1991, 2001 and 2011.

ii) Census of India publication: Primary Census Abstracts of Maharashtra, 1991, 2001 and 2011.

iii) Census of India 2001: Final Population Totals, Maharashtra Series 30 (in the form of Compact Disk).

8.3 Government Publications:

i) Annual Vital Statistics Reports of Maharashtra State, Directorate of Health Services, Government of Maharashtra, 1991-2011.

ii) Government of Maharashtra, District Socio-Economic Reviews.

iii) Solapur District Statistical Abstracts.

iv) Gazetteer of India: Maharashtra State, Solapur District, Government of Maharashtra.

8. Methodology

The title of this thesis **"A Micro level analysis of population aspects in Solapur district (Maharashtra State)"** itself reveals that the study in mainly descriptive and analytical. In fact, main intention is to analyze the facts and figures of certain aspects of population in Solapur district, its tahsils, all the villages and urban centers. Following are the various methods used for various population aspects:

Decadal Population Variations at all levels – macro, meso and micro - has been calculated in terms of population change (population growth) by using the following formula:

$$r = \frac{P_n - P_o}{P_o} X\ 100$$

Where, r = rate of change in population.

P_n = population at the end of the period.

P_o = population at the beginning of the period.

Population densities have been calculated to analyze population-space relationship by using following formulae:

1. Arithmetic density = Total population ÷ Total area
2. Rural density = Total rural population ÷ Total area
3. Urban density = Total urban population ÷ Total urban area

Sex Ratio signifies the numbers of females per thousand males. It is obtained by using following formulae:

1. General sex ratio = Total female Population ÷ Total Male population x 1000
2. Rural sex ratio = Total Rural female Population ÷ Total Rural Male population x 1000
3. Urban sex ratio = Total Urban Female Population ÷ Total Urban Male population x 1000

The Literacy Rates have been analyzed for Total, Rural and Urban Population.

1. Literacy Rate = Number of literates ÷ Population of >7 years x100

For calculation of Work Participation Rate in the study area the following formula has been used.

Work Participation Rate = Total Workers ÷ Total Population x 100

The author has used number of relevant Statistical, Quantitative Techniques i.e. Mean, Standard Deviation, correlation, coefficient of Determination and Cartographic Techniques such as different types of Graphs, Divided Circles, Proportional Circles & Squares, Scatter Diagrams, Lorenz Curves, Choropleths, etc. More stress is given on cartography as it communicates the facts and ideas clearly and forcefully. Major Field of applied cartography is the techniques of actual drawings of maps. Maps stimulate thinking and understanding about the facts and they lay the foundation for attitude formation

9. Outline of the Work

The present research work has been organized into the nine chapters.

Chapter I: Introduction

The First introductory chapter covers the introduction of population geography, importance of the theme, review of literature, choice of the study area, hypotheses,

objectives, sources of data, methodology, and outline of the work.

Chapter II: Profile of the Study Area

The second chapter is related with the physical and non-physical determinants of the study area. It contains not only the location and physiographic set up of the area but also the drainage pattern, climate, soils, land use, irrigation, agriculture, transport and communication.

Chapter III: Population Change

The third chapter is devoted to population change. It consist decade wise growth rate of Solapur district,1901 to 2011, Tahsil wise Total, Rural and Urban growth rate of Solapur district for the year 1991, 2001 and 2011. It also consist village wise growth rate of all tahsil such as Akkalkot, Barshi, Karmala, Madha, Malshiras, Mohol, Mangalwedha, Pandharpur, Sangole, North Solapur and South Solapur for the year 1991, 2001 and 2011.

Chapter IV: Variation in Population Distribution and Density

The chapter number four analyses the patterns of population distribution. It covers the general distribution of population and density at District, Tahsil and Village level for the year 1991, 2001 and 2011

Chapter V: Sex Imbalance

The chapter number five analyse the Total, Rural and Urban Sex ratio of Solapur District for the year 1991, 2001 and 2011 as well as analyse the urban centers sex ratio of Solapur district. It also consist village wise Sex Imbalance of all tahsil such as Akkalkot, Barshi, Karmala, Madha, Malshiras, Mohol, Mangalwedha, Pandharpur, Sangole, North Solapur and South Solapur for the year 1991, 2001 and 2011.

Chapter VI: Magnitude of Literacy

The sixth chapter attempts the analysis of literacy rate in the study area at district level. It also consist tahsil wise general, Male and female literacy rate of study area for the study period. In this chapter also analyzed gender disparity of Solapur district at all levels.

Chapter VII: Work Participation Rate

The highlights of chapter number seven are also important as they are related with the work participation rates at various levels in the district.

Chapter VIII: Summary and Conclusion

Summary and conclusion of the entire study are highlighted in the ninth chapter

with suitable suggestions.

References:

1. Stamp, L.D. (1956): 'The Earth Crust', George, g. Harrap and Co. Ltd., London.
2. Chandna, R.C. and Sidhu, M.S. (1980): 'Introduction to Population Geography', Kalyani Publishers, New Delhi, p. 3.
3. Trewartha, G.T. (1953): 'A Case for Population Geography', Annals of the Association of American Geographers, Vol.43, pp. 79-97.
4. Clarke, J.I. (1965): 'Population Geography', Pergamon Press, Oxford, pp.1-6.
5. Ackerman, E. A. (1959): 'Geography and Demography', In Philip M. Hauser et. al.(eds.), The Study of Population, University Press, Chicago, pp.717-27.
6. Gerasimov, I. P.(1975): 'Man, Society and Environment', Progress publishers, Moscow, p. 7.

Mr. Pravin Bhanudas Kambale
Research Student

Dr. Parag Arun Khadke
Department of Geography
Professor and Research Guide,
School of Earth Science,
Swami Ramanand Teerth Marathwada University, Nanded–431606